

45



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6101-015

Job Sheet 204345



S240281

Part No: D6101-015

Job Qty: 20 pcs

Part Name: Saddle Billet



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/6/19

Job Tracking No:

Created By: Marie Lajeunesse

Due Date: 1/20/20

Description:

Type: SOLD

Note: DWG REV B IPP RevA: New issue DD verified by:EC
Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup	Run		
					Hrs	Hrs	Workcenter / Supplier Lead Time	
100	Purchasing	20 pcs		1/20/20	0.00	0.00	Purchasing - 1	DEC 13 2019
							Purchasing - 2	
							Purchasing - 3	
110	Packaging 2-1 - Receive - B4B	20 pcs		1/20/20	0.00	0.00	Packaging 2 - 1 - B4B	
							Packaging 2 - 2 - B4B	
							Packaging 2 - 3 - B4B	
							Packaging 2 - 5 - B4B	
							Packaging 2 - 4 - B4B	
							Packaging 2 - 6 - B4B	
							Packaging 2 - 7 - B4B	
							Packaging 2 - 8 - B4B	
							Packaging 2 - 9 - B4B	
							Packaging 2 - 10 - B4B	
							Packaging 2 - 11 - B4B	
							Packaging 2 - 12 - B4B	
							Packaging 2 - 13 - B4B	
							Packaging 2 - 14 - B4B	
							Packaging 2 - 15 - B4B	
							Packaging 2 - 16 - B4B	
							Packaging 2 - 17 - B4B	
							Packaging 2 - 18 - B4B	
							Packaging 2 - 19 - B4B	DEC 13 2019
							Packaging 2 - 20 - B4B	
							Packaging 2 - 21 - B4B	
							Packaging 2 - 22 - B4B	
							Packaging 2 - 23 - B4B	
							Packaging 2 - 24 - B4B	
							Packaging 2 - 25 - B4B	
							Packaging 2 - 26 - B4B	
							Packaging 2 - 27 - B4B	
							Packaging 2 - 28 - B4B	

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120 QC 18	20 pcs	1/20/20	0.00 0.00	Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				QC 18 - 12	
130 Packaging 3-1 - Stock - B4B	20 pcs	1/20/20	0.00 0.00	QC 18 - 14	
				QC 18 - 22	
				QC 18 - 25	
				QC 18 - 48	
				QC 18 - 58	
				QC 18 - 61	
				QC 18 - 9	
				QC 18 - 81	
				Packaging 3 - 1 - B4B	
140 QC 21 - SA	20 pcs	1/20/20	0.00 0.00	Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140 QC 21 - SA	20 pcs	1/20/20	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

DEC 13 2019

87 DEC 17/19

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DEC 17 2019

Part Op 100 - Issue P/O: _____ b) 9.450" x 6.250" x 2.50" thick (+0.030 / -0.000) d) Grain direction along 9.450"

Descriptions: length

110 - (Receive & Inspect for Damage & Mat'l Certs), Ensure material certification is attached

120 - (QC18 In-Coming Inspection Material), Ensure Material certification comply to Dwg D6101
130 - (Identify as per dwg & Stock Location: _____), LOCATION: MAT045
140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6101-015P	Aluminum Billet	20 pcs (1 ea)	100-Purchasing	5240278

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6101-015P	20	0	0

Part Specifications

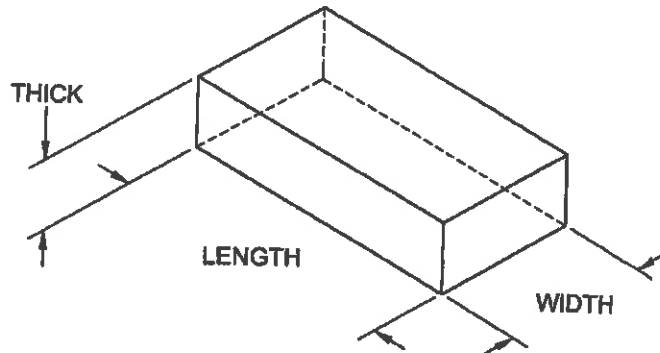
Specifications could not be found.

Plex 12/6/19 1:24 PM Dart.lajeunesse.marie

LINE 2
D6101-015

H/T 316172 B6
304151 B4

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

B

RELEASED
09/15/15/W

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 204745 MWS
19-1206

B	ADDED D6101-015/-017, ADD ASTM 8209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D6101	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only



Job: _____ Part No. _____		DISPOSITION				DEPARTMENT/PROCESS													
		Rework Scrap Use-as-is			Skid-tube Machining Large Fab		Cross tube Small Fab Finishing		Eng. (Non-AW) Prod. Eng. Coord. Rec/Store/Packaging		Engineering Water Jet Supplier Quality								
Date:	Sequence #:	QTY Affected:		MRB (QS1042)															
Description Work Order Deviation				Disposition															
Root Cause Operator Manufacturing Process Equip/Tooling Handling/Preservation Material Product Improvement Process Improvement Human Factors				FAULT CATEGORY															
				Pressure/Forced Bending Crushing Cracks Crimp/Kink/Ripple/Wave/Twist Marks/Chatter Mislabeled				Contamination Misaligned/off center BOM/Route Broken/Damage/Defect Incomplete/Unclear Instructions Drill Holes Fit/Function				Power Loss/Surge Folio/Program Grain Direction Weld Wrong Stock Pulled Out of Sequence Off-set/Set-up				Positioned Wrong Outside Tolerance Drawing Finish Part Lost/Missing Misread			
				Other/Details:															
				Completed By															
				Lead hand / Supervisor															
				QC / QA Coordinator															



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045345



Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W 0E9 Canada

PO No: POHB045345

PO Date: 12/9/19

Due Date: 1/14/20

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: 613-623-5200 Ext: 242
Fax: 613-632-1053
clavoie@dartaero.com

DEC 09 2019

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		D6101-003P	D6101 REV. B	72742	7075-T7351 2X6.25X7.875 : Various STC's AS PER DWG D6101 REV. B SIZE: 7.875" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 7.875" LENGHT MATERIAL: 7075-T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	1/14/20	20 pcs	0 pcs 19 pcs 663	20 pcs	\$38.82/pcs	\$776.40
2		D6101-015P	D6101 REV. B	72741	Aluminium Billet : Various STC's As per Dwg D6101 Rev. B	Firmed	-	1/14/20	20 pcs	0 pcs 2075 663	20 pcs	\$57.20/pcs	\$1,144.00
3		D6101-017P	D6101 REV. B	72740	Aluminum Billet : Various STC's As per Dwg D6101 Rev. B	Firmed	-	1/14/20	20 pcs	0 pcs 2075 663	20 pcs	\$32.64/pcs	\$652.80

DEC 13 2019

DEC 13 2019

DEC 13 2019



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045345



Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
4		D6104-003P	D6104 REV. B		17-4 SS Roundbar 3.25"Od : AS PER DWG D6104 REV. B MAT'L 17-4 PH PER AMS 5643 OR AISI 630 SIZE: 3.250" DIA X 3.80" LENGTH	Firmed	-	1/14/20	10 pcs	0 pcs <i>10 pcs 6/25</i>	10 pcs	\$26.70/pcs	\$267.00
													DEC 13 2019
Grand Total:													\$2,840.20

DEC 13 2019

Order Notes

Procurement Quality Clauses

- A005 right of entry
- A012 chemical and physical test report
- A016 personnel qualification
- A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)
- A026 certification of material conformance
- A041 quality management system
- A042 dart notification by supplier
- A043 retention of quality documents
- A048 counterfeit parts avoidance, detection, mitigation and disposition program.
- A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/9/19 11:14 AM Dart.Lavoie.Chantal

LINE 2



Castle Metals®

A. M. Castle & Co.

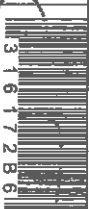
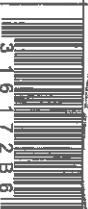
PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No: 4058416

Ship From:	Sold To:		Ship To:		Deliver To:	
A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	Inco Terms		Freight Terms		Carrier	BOL No
11-DEC-19	FCA HAWKESBURY ON CAN		Prepaid & Add		LOCAL_FLEET	4058416-7

Shipment Details

Order No	Line No	Item No	Description				
5677416	2	72741	2.5000.PL.7075.T7351.ALUMINUM.GRAIN TO RUN ALONG 9.4500 IN.6.2500.9.4500 SPECIFICATIONS: AMS-QQ-A-250/12				
Purchase Order No	Part Number	Ordered Qty	Invoice Qty				
POHB045345	YOUR ITEM NUMBER: D6101-015	20.00 PCS	20.00 PCS				
Details	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clayvie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS						
Delivery No.	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
123033291	KAISER ALUMINUM	 316172861 6603		8	6.2500	9.4500	122.1696
123033291	KAISER ALUMINUM	 316172861		9	6.2500	9.4500	137.4408

LINE -



Castle Metals[®]

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

123033291	KAISER ALUMINUM	 3 0 4 1 5 1 B 4 1	3	6.2500	9.4500	45.8136
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These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be reexported, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material of the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

DEC 11 2019

Date:

Name:

[Signature]



2

SHIP TO: A M CASTLE & CO 3050 SOUTH HYDRAULIC WICHITA, KS 67216
SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

KAISER ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2583

CERTIFIED TEST REPORT

Serial Number

4564754

CUSTOMER PO NUMBER: 493845-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 752241	SHIP RUN/LOAD: 104618/42	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1281979-1	SHIP DATE: 10-MAY-2019	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: KaiserSelect Plate
WEIGHT SHIPPED: 7146 LB (3241.4 KG)	QUANTITY: 4 PCS EST.	TRUCK B/L #: 2080808	GAUGE: 2.5000 IN (63.5000 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)	LENGTH: 144.500 IN (3670.3 MM)

MHU 2338732: LOT 316172B6: 2 pieces;

MHU 2338733: LOT 316172B6: 2 pieces;

Certified Specifications

AMS 4078/RevK

ASTM B 209/Rev14

BSS 7055/RevB

DPS 4.713/RevAK

GSS16100/RevG/Amd1

PS 21211/RevP

AMS-QQ-A-250/12/RevA

ASTM B 594/Rev13

CMMP 025/RevV

EAC MS1011/RevE

MMS 159/RevT

AMS-STD-2154/RevC

BAC 5439/RevJ

CSTI 006/RevE

GAMPS 9101/RevB/AmdSCN1

PPS 20.04/Rev7

Test Code: 4297

Lot: 316172B6 Cast 840

Drop 13

Test Results

Ingot 1

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.6 : 71.7 (494 : 494)	60.0 : 60.1 (414 : 414)	13.0 : 13.3

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	41.5 Min	41.8 Max
(MS/M) :	24.1 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.06	0.13	1.5	0.02	2.5	0.20	5.7	0.02	0.01	0.01	TOT 0.03





CERTIFIED TEST REPORT

Serial Number
4564754

Trentwood Works
PO Box 15108, Spokane Valley WA 99215-5108
15000 E Euclid, Spokane Valley WA 99216
Phone: (800) 367-2586

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-154138 R 10
7055

TEST NOTES

Metal represented by this test report was 100% Type I (immersion) ultrasonically tested from one side with 3mm dead zones top and bottom and meets the Class A and Class B requirements of all specifications referenced on this test report. No surface marking of sonic indications is performed.

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- * All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.
- * was melted in the United States of America or a qualifying country per DFARS 225.972-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- * has been thermally processed in compliance with AMS 2772, where applicable.
- * is mercury free, within the limits of detection of ASTM E1215 (< 1 ppm).
- * is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- * is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- * is free of weld repair.
- * meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.



Michael Peske, PT Lab Process Engineer

2

SHIP TO: A M CASTLE & CO 3050 SOUTH HYDRAULIC WICHITA, KS 67216
SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523



Trentwood Works
PO Box 15108, Spokane Valley WA 99215-5108
15000 E Euclid, Spokane Valley WA 99216
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4558153

CUSTOMER PO NUMBER: 489569-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 752241	SHIP RUN/LOAD: 104579/22	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1277888-1	SHIP DATE: 30-MAR-2019	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: KaiserSelect Plate
WEIGHT SHIPPED: 14300 LB (6486.44 KG)	QUANTITY: 8 PCS EST.	TRUCK B/L #: 2079967	GAUGE: 2.5000 IN (63.5000 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)	LENGTH: 144.500 IN (3670.3 MM)

MHU 2317788: LOT 721624B5: 1 pieces;
MHU 2318337: LOT 304234B8: 1 pieces;
MHU 2318338: LOT 721597B3: 2 pieces;
MHU 2318342: LOT 304151B4: 2 pieces;
MHU 2318344: LOT 304151B4: 2 pieces;

Certified Specifications

AMS 4078/RevK ASTM B 209/Rev14 BSS 7055/RevB DPS 4.713/RevAK GSS16100/RevG/Amd1 PS 21211/RevP	AMS-QQ-A-250/12/RevA ASTM B 594/Rev13 CMMP 025/RevV EAC MS1011/RevE MMS 159/RevT	AMS-STD-2154/RevC BAC 5439/RevJ CSTI 006/RevE GAMPS 9101/RevB/AmdSCN1 PPS 20.04/Rev7
--	--	--

Test Code: 4297 *643*
Lot: 304151B4 **Cast 800** **Drop 12** **Test Results** **Ingot 2** **Melted in USA**

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.4 : 70.9 (485 : 489)	59.5 : 59.7 (410 : 412)	12.6 : 12.6

(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :	41.6 Min	42.1 Max
(MS/M) :	24.1 Min	24.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.18	1.4	0.04	2.4	0.20	5.6	0.03	0.01	0.02	TOT 0.03



KAISER ALUMINUM

Trentwood Works
PO Box 15108, Spokane Valley WA 99215-5108
15000 E Euclid, Spokane Valley WA 99216
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4558153

Lot: 304234B8 Cast 800 Drop 13 Ingot 4 Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.4 : 71.0 (485 : 490)	59.8 : 60.2 (412 : 415)	12.7 : 12.8

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	41.9 Min	42.3 Max
(MS/M) :	24.3 Min	24.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.18	1.4	0.04	2.4	0.19	5.7	0.03	0.01	0.01	TOT 0.03
Lot: 721597B3	Cast 800		Drop 12		Ingot 2		Parent Lot: 304151B4				Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.6 : 72.1 (487 : 497)	59.6 : 61.9 (411 : 427)	11.9 : 12.7

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	41.9 Min	42.0 Max
(MS/M) :	24.3 Min	24.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.18	1.4	0.04	2.4	0.20	5.6	0.03	0.01	0.02	TOT 0.03
Lot: 721624B5	Cast 800		Drop 22		Ingot 5		Parent Lot: 305522B5				Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.1 : 71.5 (490 : 493)	60.1 : 60.6 (414 : 418)	12.5 : 12.9

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	42.0 Min	42.2 Max
(MS/M) :	24.4 Min	24.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.07	0.16	1.4	0.03	2.4	0.20	5.6	0.03	0.01	0.01	TOT 0.03



KAISER ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4558153

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15413B R 9

7055

TEST NOTES

Metal represented by this test report was 100% Type I
(immersion) ultrasonically tested from one side with 3mm
dead zones top and bottom and meets the Class A and Class B
requirements of all specifications referenced on this test
report. No surface marking of sonic indications is
performed.

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.
- was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- has been thermally processed in compliance with AMS 2772, where applicable.
- is mercury free, within the limits of detection of ASTM E1215 (<1 ppm).
- is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- is free of weld repair.
- meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

Michael Peske, PT Lab Process Engineer



LINE 2

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6101-015DATE: DEC 12 2019PO / BATCH NO.: POHB045345=> S240278MATERIAL CERT REC'D: YESQUANTITY RECEIVED: 20 PLSQUANTITY INSPECTED: 20 PLSQUANTITY REJECTED: —THICKNESS ORDERED: 2.500THICKNESS RECEIVED: 2.500SHEET SIZE ORDERED: 6.25 x 9.450SHEET SIZE RECEIVED: 6.25 x 9.450

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N	
CORRECT FINISH	☒ Y N	
CORROSION	Y ☒ N	
CORRECT GRAIN DIRECTION	☒ Y N	
CORRECT MATERIAL PER M-DRAWING	☒ Y N	ASTM B 209
CORRECT THICKNESS	☒ Y N	
PHOTO REQUIRED	Y ☒ N	
CORRECT REF # TO LINK CERT	☒ Y N	HT 316172B6 & 304151B4
CORRECT MATERIAL IDENTIFICATION	☒ Y N	
CORRECT M# ON THE MATERIAL	☒ Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>82</u> <u>9-89</u>	SIGNED OFF BY: _____		
DATE: <u>DEC 12 2019</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in